

NFPA DESIGNATION 704

MSDS 08

HAZARD RATING	- HEALTH	3
4-Extreme		
3-High	- FIRE	4
2-Moderate		
1-Slight	- REACTIVITY	1
0-Insignificant		
	- SPECIFIC HAZARD	NONE



## MATERIAL SAFETY DATA SHEET

## SECTION 1 NAME AND PRODUCT

MANUFACTURER'S NAME: SUNNEN PRODUCTS COMPANY  
ADDRESS: 7910 Manchester Ave.  
St. Louis, Mo. 63143  
United States of America

CONTACT: Terry Heller  
EMERGENCY PHONE NO: 314-781-2105  
APPROVED BY: Terry Heller  
TITLE: Manager, Materials R/D  
DATE: August 15, 1987

TRADE NAME, COMMON NAME OR SPECIFICATION: **Sunn B200 LUBRICANT**  
CHEMICAL FAMILY: MIXTURE OF CHLORINATED HYDROCARBONS, ALKANE HYDROCARBONS AND POLYMERIZED PLANT OIL.  
CLASSIFICATION: COMPRESSED GAS N.O.S.  
D.O.T. SHIPPING CLASS: ORN-D

## SECTION 2 HAZARDOUS INGREDIENTS/IDENTITY (PER 29 C.F.R. 1910.1200(g))

COMMON NAME	CHEMICAL NAME OF COMPONENTS	CAS NO	WT %	OSHA PEL	ACGIH TLV-TWA	OTHER	CARCINOGENIC
TRICHLOROETHANE (Stabilized)	1-1-1 TRICHLOROETHANE	71-55-6	59.5	350 PPM	350 PPM		NO
	tert-BUTYL ALCOHOL	75-65-0		100 PPM	100 PPM		
	1,2-BUTYLENE OXIDE	106-688-7				*40 PPM	
	DIMETHOXYMETHANE	109-87-5			1000 PPM		
A-55	ISOBUTANE	68476-8608	30	NONE	800 PPM	**860 PPM	NO
	PROPANE			1000 PPM	NONE		
TALL OIL POLYMER		70900-00-4	10.5	NONE	NONE		NO

PPM=Parts per Million. \* DOW INDUSTRIAL HYGIENE GUIDE, DOW CHEMICAL COMPANY \*\* CALCULATED

## SECTION 3 PHYSICAL &amp; CHEMICAL CHARACTERISTICS

SPECIFIC GRAVITY (WATER=1)----- 1.041 CALCULATED  
BOILING POINT----- -43.7 F (-42 C) PROPELLANT  
165 F (74 C) LUBRICANT MIXTURE  
PERCENT VOLATILE BY WEIGHT----- 89%  
VAPOR PRESSURE (mm Hg)----- 42 PSIG @ 68 F (20C)  
VAPOR DENSITY (Air=1)----- 2.871 ESTIMATED  
EVAPORATION RATE----- FASTER THAN BUTYL ACETATE (Propellant/Solvent). Residual product is non-volatile.  
SOLUBILITY IN WATER----- < .1% @ 77 F (25C)  
REACTIVITY IN WATER----- NOT REACTIVE  
APPEARANCE AND ODOR----- AMBER COLOR LIQUID WITH ODOR OF CHLORINATED SOLVENT

## SECTION 4 SPECIAL PRECAUTIONS

HANDLING AND STORAGE: DO NOT STORE NEAR FIRE OR FLAME OR WHERE TEMPERATURE EXCEEDS 120 F (50 C).  
OTHER: DO NOT SMOKE WHEN FUMES ARE PRESENT. USE WITH POSITIVE VENTILATION.

## SECTION 5 CORROSIVITY AND REACTIVITY DATA

STABILITY: MATERIAL IS STABLE.  
POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR.  
INCOMPATIBILITY: PEROXIDES OR STRONG OXIDIZING AGENTS SUCH AS CHLORINE, PERMANGANATES, AND DICHROMATES.  
(materials to avoid)  
DECOMPOSITION PRODUCTS: COMBUSTION OF MATERIAL WILL PRODUCE OXIDES OF CARBON, NITROGEN AND OTHER PRODUCTS OF COMBUSTION. MAY PRODUCE TOXIC OR CORROSIVE FUMES SUCH AS HYDROGEN CHLORIDE AND SMALL AMOUNTS OF PHOSGENE AND CHLORINE WHEN HEATED TO DECOMPOSITION AS IN WELDING OR FIRE.

## SECTION 6 HEALTH, FIRST AID AND MEDICAL DATA

PRIMARY ROUTE(S) OF ENTRY	ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE	FIRST AID AND MEDICAL INFORMATION
INHALATION	THE PROPELLANT (A55) IS AN ASPHYXIANT. THE SOLVENT (1-1-1 TRICHLOROETHANE) ACTS AS AN ANESTHETIC, CAUSES IRRITATION OF THE RESPIRATORY TRACK OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: EYE WATERING, HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, CARDIAC ARRHYTHMIAS (IRREGULAR HEARTBEATS), UNCONSCIOUSNESS, COMA AND DEATH. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL. BASED ON AVAILABLE DATA, REPEATED EXPOSURES ARE NOT ANTICIPATED TO CAUSE ANY SIGNIFICANT ADVERSE EFFECTS. 1-1-1 TRICHLOROETHANE AND SIMILAR MIXTURES DID NOT CAUSE CANCER IN LONG TERM ANIMAL STUDIES. BIRTH DEFECTS ARE UNLIKELY. EXPOSURES HAVING NO ADVERSE EFFECTS ON THE MOTHER SHOULD HAVE NO EFFECT ON THE FETUS. IN ANIMAL STUDIES, HAS BEEN SHOWN NOT TO INTERFERE WITH REPRODUCTION. RESULTS OF IN VITRO ("TEST TUBE") MUTAGENICITY TESTS ON 1-1-1 TRICHLOROETHANE HAVE BEEN NEGATIVE. RESULTS OF MUTAGENICITY TESTS IN ANIMALS HAVE BEEN NEGATIVE.	REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE MOUTH TO MOUTH RESUSCITATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK MEDICAL ATTENTION.
INGESTION	THE PROPELLANT IS A GAS UNDER NORMAL ATMOSPHERIC CONDITIONS AND IS THEREFORE UNLIKELY TO BE INGESTED. THE SINGLE DOSE ORAL TOXICITY FOR THE SOLVENT AND LUBRICANT IS LOW. THE LD50 FOR RATS IS >10,000 mg/kg FOR 1-1-1 TRICHLOROETHANE. IF ASPIRATED (LIQUID ENTERS THE LUNG), IT MAY BE RAPIDLY ABSORBED THROUGH THE LUNGS AND RESULT IN INJURY TO OTHER BODY SYSTEMS.	DO NOT INDUCE VOMITING. CALL A PHYSICIAN AND/OR TRANSPORT TO EMERGENCY FACILITY IMMEDIATELY.
SKIN CONTACT & ABSORPTION	PRIMARY IRRITANT. THE LD50 FOR RABBITS IS ABOUT 15,000 mg/kg FOR 1-1-1 TRICHLOROETHANE. PROLONGED OR REPEATED CONTACT MAY CAUSE DRYING OR FLAKING OF THE SKIN.	WASH HANDS WITH MILD NON-ABRASIVE SOAP AND WATER. IF IRRITATION DEVELOPS SEEK MEDICAL ATTENTION.
EYE	MAY CAUSE PAIN. MAY CAUSE SLIGHT TRANSIENT (TEMPORARY) IRRITATION WITH SLIGHT TRANSIENT CORNEAL INJURY. VAPORS MAY IRRITATE EYES.	REMOVE CONTACT LENSES (IF WEARING) AND FLUSH EYES WITH WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION.

## SECTION 7 HANDLING, STORAGE AND USE PROCEDURES

NORMAL STORAGE AND HANDLING: STORE IN WELL VENTILATED AREAS AWAY FROM SOURCES OF IGNITION AS DAMAGED OR LEAKING CANS WILL

RELEASE PROPELLANT WHICH IS HIGHLY FLAMMABLE, HEAVIER THAN AIR AND MAY TRAVEL LONG DISTANCES TO A SOURCE OF IGNITION AND FLASH BACK CAUSING THE CONTAINER TO BURN OR EXPLODE. POST AREAS "NO SMOKING OR OPEN FLAMES". DO NOT STORE AT TEMPERATURES ABOVE 120 F (49 C) OR IN DIRECT SUNLIGHT AS CAN MAY OVERHEAT AND BURST RELEASING THE HIGHLY FLAMMABLE PROPELLANT. COOL OVERHEATED CANS IF POSSIBLE. DO NOT STORE NEAR OXIDIZING AGENTS. KEEP OUT OF THE REACH OF CHILDREN.

**NORMAL USE:**

USE ONLY WITH ADEQUATE VENTILATION, ENSURING FRESH AIR ENTRY DURING USE AS BREATHING VAPORS CAN CAUSE DIZZINESS, UNCONSCIOUSNESS OR COMA. IF EYE WATERING, HEADACHE OR DIZZINESS IS EXPERIENCED, INCREASE VENTILATION OR SEEK FRESH AIR. VAPORS WILL ACCUMULATE READILY AND ARE POTENTIALLY EXPLOSIVE. DO NOT SPRAY NEAR SPARKS, HEAT OR OPEN FLAME AS PROPELLANT MAY IGNITE CREATING A FIRE HAZARD. CONTACT OF SPRAY OR FUMES WITH HOT SURFACES SUCH AS CIGARETTES, HOT PLATE, FURNACE OR FLAME MAY RELEASE HYDROGEN CHLORIDE, CHLORINE OR PHOSGENE GAS THAT IS TOXIC AND CORROSIVE. DO NOT SMOKE WHILE SPRAYING AS TOXIC GASES ARE FORMED AS FUMES PASS THRU THE LIT CIGARETTE. WEAR PROTECTIVE GOGGLES IF MIST IS PRESENT OR IF ANY POSSIBILITY OF EYE CONTACT EXISTS. WEAR NIOSH APPROVED RESPIRATOR IF VAPORS APPROACH TLV. DO NOT DROP CONTAINER AS IT MAY DENT OR USE A DEFORMED CONTAINER. A DEFORMED CONTAINER HAS REDUCED EXPANSION SPACE AND MAY DEVELOP DANGEROUS PRESSURE CAUSING IT TO BURST IN A VIOLENT MANNER. WASH HANDS AFTER USING.

**STEPS TO BE TAKEN  
IN CASE OF LEAKS  
OR SPILLS**

IF A CAN DEVELOPS A LEAK, MOVE IT OUTSIDE OR TO A WELL VENTILATED AREA IMMEDIATELY TO PREVENT ACCUMULATION OF THE FLAMMABLE PROPELLANT WHICH IS POTENTIALLY EXPLOSIVE. IF LEAKING CONTAINERS ARE FOUND IN A STORAGE AREA ELIMINATE ALL IGNITION SOURCES. VENTILATE TO REDUCE AND REMOVE THE PROPELLANT FIRE HAZARDS BEFORE ENTERING OR USING EQUIPMENT IN THESE AREAS. ABSORB LIQUID WITH INERT MATERIAL. VAPOR LEVELS EXCEEDING TLV MAY BE PRESENT.

**WASTE DISPOSAL METHODS:**

DO NOT INCINERATE AS CONTAINER MAY EXPLODE. DO NOT DISCARD IN COMPACTOR AS CONTENTS MAY BE RELEASED IN A DANGEROUS MANNER RESULTING IN FIRE OR EXPLOSION. DISPOSE OF IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, RULES, ORDERS AND ORDINANCES.

**SECTION 8 PERSONAL PROTECTION INFORMATION**

**RESPIRATORY PROTECTION:** ATMOSPHERIC LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINES. WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR. FOR EMERGENCY AND OTHER CONDITIONS WHERE THE EXPOSURE GUIDELINE MAY BE GREATLY EXCEEDED, USE AN APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.

**VENTILATION:** ENSURE FRESH AIR ENTRY DURING USE. IF TLV LEVELS ARE APPROACHED OR ANY DISCOMFORT IS EXPERIENCED PROVIDE POSITIVE MECHANICAL VENTILATION.

**PROTECTIVE GLOVES:** IF PREFERRED OR IF SENSITIVITY TO MATERIAL HAS BEEN DEMONSTRATED.

**EYE PROTECTION:** WEAR PROTECTIVE GOGGLES TO PREVENT EYE CONTACT.

**SECTION 9 FIRE AND EXPLOSION HAZARD DATA**

**FLASH POINT=** PROPELLANT -156 F (-249 C) Method used: ASTM D-92  
SOLVENT NONE

FLAMMABLE LIMITS	LEL (lower)	UEL (upper)	Method: ASTM E-681
IN AIR % BY VOLUME			
PROPELLANT	1.8%	9.5%	
SOLVENT	6.0%	16.7%	

**EXTINGUISHING MEDIA:** FOAM, CARBON DIOXIDE, DRY CHEMICAL, WATER FOG

**SPECIAL FIRE FIGHTING PROCEDURES:** WEAR POSITIVE PRESSURE, SELF-CONTAINED RESPIRATORY EQUIPMENT. EXPOSURE TO TEMPERATURE ABOVE 120 F MAY CAUSE THE CONTAINER TO BURST, RELEASING THE HIGHLY FLAMMABLE PROPELLANT. WATER SPRAY USED TO COOL THE CONTAINERS DURING FIRE CONDITIONS MAY HELP PREVENT RUPTURE.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** TREAT AS CYLINDERS OF COMPRESSED FLAMMABLE GAS. PROPELLANT VAPORS ARE HEAVIER THAN AIR. IN CASE OF RUPTURE, VENTILATE AS TO PREVENT CONCENTRATIONS FROM REACHING FLAMMABLE LEVELS.

**NOTICE**

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